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1 [Optimizing lock protocols for native XML processing](#)

[Michael Haustein](#), [Theo Härder](#)

April 2008 **Data & Knowledge Engineering**, Volume 65 Issue 1

Publisher: Elsevier Science Publishers B. V.

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): n/a, Downloads (12 Months): n/a, Downloads (all time): n/a

Processing XML documents in multi-user database management environments requires support of typical XML document processing (XDP) interfaces, and concurrent XML data model. In this paper, ...

Keywords: DOM-based XML processing, Fine-grained locking, Lock competition protocols

2 [Scalable hierarchical locking for distributed systems](#)

[Nirmit Desai](#), [Frank Mueller](#)

June 2004 **Journal of Parallel and Distributed Computing**, Volume 64 Issue 6

Publisher: Academic Press, Inc.

Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): n/a, Downloads (12 Months): n/a, Downloads (all time): n/a

Middleware components are becoming increasingly important as applications are deployed in distributed environments, such as high-end clusters with ever larger numbers of nodes and increasingly large server farms. ...

Keywords: concurrency services, distributed agreement, distributed mutual exclusion, distributed transactions, hierarchical locking, large-scale distributed systems, peer-to-peer protocols, scalability

3 [Evaluating design alternatives for reliable communication on high-speed networks](#)

[Raoul A. F. Bhoedjang](#), [Kees Verstoep](#), [Tim Rühl](#), [Henri E. Bai](#), [Rutger F. H. Heijmans](#)

December 2000 **ASPLOS-IX: Proceedings of the ninth international conference on parallel architectures and programming languages and operating systems**

Publisher: ACM [Request Permissions](#)

Full text available: Pdf (147.96 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

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We systematically evaluate the performance of five implementations of a s interface. Each implementation makes different architectural assumptions : hardware and the capabilities of the ...

Also published in:

December 2000 **SIGARCH Computer Architecture News** Volume 28 Issue 5

December 2000 **SIGOPS Operating Systems Review** Volume 34 Issue 5

4 [Scalable performance of the Panasas parallel file system](#)

[Brent Welch](#), [Marc Unangst](#), [Zainul Abbasi](#), [Garth Gibson](#), [Brian Mueller](#), [Jason February 2008](#) **FAST'08: Proceedings of the 6th USENIX Conference on File an**


Publisher: USENIX Association

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): n/a, Downloads (12 Months): n/a, Download

The Panasas file system uses parallel and redundant access to object stora distributed metadata management, consistent client caching, file locking se to provide a scalable, fault ...

5 [Towards achieving fairness in the Linux scheduler](#)

 [Chee Siang Wong](#), [Ian Tan](#), [Rosalind Deena Kumari](#), [Fun Wey](#)

July 2008 **SIGOPS Operating Systems Review** , Volume 42 Issue 5

Publisher: ACM

Full text available:  Pdf (908.64 KB)


Additional Information: [full citation](#), [abstract](#),

Bibliometrics: Downloads (6 Weeks): 23, Downloads (12 Months): 567, Download

The Operating System scheduler is designed to allocate the CPU resources Completely Fair Scheduler (CFS) design ensures fairness among tasks usin This algorithm ensures ...

Keywords: Linux, completely fair scheduler, fairness, process scheduling

6 [Servo: a programming model for many-core computing](#)

 [Nicolas Zee](#), [John Sartori](#), [Rakesh Kumar](#)

May 2008 **SIGARCH Computer Architecture News** , Volume 36 Issue 2

Publisher: ACM

Full text available:  Pdf (511.28 KB)

Additional Information: [full citation](#), [abstract](#),


Bibliometrics: Downloads (6 Weeks): 22, Downloads (12 Months): 105, Download

Conventional programming models were designed to be used by expert pro scale multiprocessors, distributed computational clusters, or specialized pa therefore, are deemed either too difficult ...

7 [OPENET Architecture, The](#)

[Israel Cidon](#), [Tony Hsiao](#), [Asad Khamisy](#), [Abhay Parekh](#), [Raphael Rom](#), [Moshe December 1995](#) OPENET Architecture, The

Publisher: Sun Microsystems, Inc.

Full text available:  Pdf (195.25 KB)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 0, Downloads (12 Months): 4, Downloads (C

ATM networks will soon be moving from the experimental stage of test-bed production networks are deployed and operated. The progress of ATM network lack of a universal, open, and efficient ...

8 [Minuet: rethinking concurrency control in storage area networks](#)

Andrey Ermolinskiy, Daekyeong Moon, Byung-Gon Chun, Scott Shenker

February 2009 **FAST '09**: Proceedings of the 7th conference on File and storage


Publisher: USENIX Association

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): n/a, Downloads (12 Months): n/a, Downloads



Clustered applications in storage area networks (SANs), widely adopted in traditionally relied on distributed locking protocols to coordinate concurrent examine the semantics of traditional ...

9 [The development of the Emerald programming language](#)

 Andrew P. Black, Norman C. Hutchinson, Eric Jul, Henry M. Levy

June 2007 **HOPL III**: Proceedings of the third ACM SIGPLAN conference on

Publisher: ACM  [Request Permissions](#)

Full text available:  [Mov](#) (54:7 MIN),  [Pdf](#) (1.45 MB) Additional Information: [full citation](#), [abstract](#), [cited by](#), [index](#)

Bibliometrics: Downloads (6 Weeks): 29, Downloads (12 Months): 208, Downloads

Emerald is an object-based programming language and system designed at Computer Science at the University of Washington in the early and mid-1990s for the construction of distributed ...


Keywords: Eden, Emerald, Washington, abstract types, call-by-move, dismobility, object-oriented programming, polymorphism, remote object invocation, conformity

10 [Solaris MC File System Framework](#)

Yousef A. Khalidi, Vlada Matena, Ken Shirriff

October 1996 Solaris MC File System Framework

Publisher: Sun Microsystems, Inc.

Full text available:  [Pdf](#) (71.09 KB)

Additional Information: [full citation](#), [abstract](#), [cited by](#), [index](#)

Bibliometrics: Downloads (6 Weeks): 0, Downloads (12 Months): 4, Downloads (C

The Solaris MC cluster operating system contains a new distributed file system applicable for distributed file systems. The file system's object-oriented interface is the framework for file system ...

11 [Exploiting distributed version concurrency in a transactional memory cli](#)

 Kaljoian Manassiev, Madalin Mihalescu, Cristiana Amza

March 2006 **PPoPP '06**: Proceedings of the eleventh ACM SIGPLAN symposium on programming

Publisher: ACM  [Request Permissions](#)

Full text available:  [Pdf](#) (317.86 KB)

Additional Information: [full citation](#), [abstract](#), [cited by](#), [index](#)

Bibliometrics: Downloads (6 Weeks): 15, Downloads (12 Months): 92, Downloads

We investigate a transactional memory runtime system providing scaling a serializability on commodity clusters for both distributed scientific applicati introduce a novel page-level ...

Keywords: concurrency control, in-memory, replicated databases, scalabi

12 [Active sensor networks](#)

[Philip Levis](#), [David Gay](#), [David Culler](#)

May 2005

NSDI '05: Proceedings of the 2nd conference on Symposium on Operating Systems Principles - Volume 2, Volume 2

Publisher: USENIX Association


Full text available:  [Pdf](#) (342.49 KB)

Additional Information: [full citation](#), [abstract](#),

Bibliometrics: Downloads (6 Weeks): 16, Downloads (12 Months): 68, Downloads

We propose using application specific virtual machines (ASVMs) to reprogram ASVMs provide a way for a user to define an application-specific boundary This allows programs to be ...

13 [Performance evaluation of the Orca shared-object system](#)

 [Henri E. Bai](#), [Raoul Bhoedjang](#), [Rutger Hofman](#), [Ceriël Jacobs](#), [Koen Langendoen](#)

February 1998 **Transactions on Computer Systems (TOCS)**, Volume 16 Issue

Publisher: ACM  [Request Permissions](#)

Full text available:  [Pdf](#) (179.39 KB)


Additional Information: [full citation](#), [abstract](#),

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 46, Downloads

Orca is a portable, object-based distributed shared memory (DSM) system design choices made in the Orca system and compares Orca with other DSM analysis of Orca's coherence protocol ...

Keywords: distributed shared memory, parallel processing, portability

14 [OLTP through the looking glass, and what we found there](#)

 [Stavros Harizopoulos](#), [Daniel J. Abadi](#), [Samuel Madden](#), [Michael Stonebraker](#)

June 2008

SIGMOD '08: Proceedings of the 2008 ACM SIGMOD international conference on Management of data

Publisher: ACM  [Request Permissions](#)

Full text available:  [Pdf](#) (308.68 KB)


Additional Information: [full citation](#), [abstract](#),

Bibliometrics: Downloads (6 Weeks): 30, Downloads (12 Months): 378, Downloads

Online Transaction Processing (OLTP) databases include a suite of features locking-based concurrency control, support for multi-threading - that were the late 1970's. Advances ...

Keywords: dbms architecture, main memory transaction processing, oltp,

15 [FAB: building distributed enterprise disk arrays from commodity components](#)

 [Yasushi Saito](#), [Svend Frølund](#), [Alistair Veitch](#), [Arif Merchant](#), [Susan Spence](#)

December 2004 **ASPLOS-XI: Proceedings of the 11th international conference on Architectural Support for Programming Languages and Operating Systems**

programming languages and operating systems

Publisher: ACM  [Request Permissions](#)

Full text available:  Pdf (671.67 KB)

Additional Information: [full citation](#), [abstract](#),

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 90, Downloads

This paper describes the design, implementation, and evaluation of a Federated disk array that provides the reliability of traditional enterprise arrays with I/O built from a ...

Keywords: consensus, disk array, erasure coding, replication, storage, volume

Also published in:

November 2004 **SIGPLAN Notices**


Volume 39 Issue 11

December 2004 **SIGOPS Operating Systems Review**

Volume 38 Issue 5

December 2004 **SIGARCH Computer Architecture News** Volume 32 Issue 5

16 Scheduler-conscious synchronization

 Leonidas J. Kontothanassis, Robert W. Wisniewski, Michael L. Scott

February 1997 **Transactions on Computer Systems (TOCS)**, Volume 15 Issue

Publisher: ACM  [Request Permissions](#)

Full text available:  Pdf (682.20 KB)

Additional Information: [full citation](#), [abstract](#),

Bibliometrics: Downloads (6 Weeks): 10, Downloads (12 Months): 64, Downloads

Efficient synchronization is important for achieving good performance in parallel scale multiprocessors. Most synchronization algorithms have been designed for one application process per ...

Keywords: barriers, busy-waiting, kernel-user interaction, locks, mutual exclusion scheduling, synchronization

17 The Chubby lock service for loosely-coupled distributed systems

Mike Burrows

November 2006 **OSDI '06: Proceedings of the 7th symposium on Operating systems**

Publisher: USENIX Association


Full text available:  Pdf (201.57 KB)

Additional Information: [full citation](#), [abstract](#),

Bibliometrics: Downloads (6 Weeks): 14, Downloads (12 Months): 112, Downloads

We describe our experiences with the Chubby lock service, which is intended to be as well as reliable (though low-volume) storage for a loosely-coupled distributed interface much like a distributed ...

18 Proceedings of the 2008 ACM symposium on Applied computing

 Roger L. Wainwright, Hisham M. Haddad

March 2008 **SAC '08: Proceedings of the 2008 ACM symposium on Applied computing**

Publisher: ACM

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): n/a, Downloads (12 Months): n/a, Downloads

Welcome to the 23rd Annual ACM Symposium on Applied Computing (SAC) dedicated to computer scientists, engineers, and practitioners seeking innovative computer applications. This year, the conference ...

19 [Architecture of a Database System](#)

[Joseph M. Hellerstein](#), [Michael Stonebraker](#), [James Hamilton](#)

February 2007 **Foundations and Trends in Databases**, Volume 1 Issue 2


Publisher: Now Publishers Inc.

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): n/a, Downloads (12 Months): n/a, Downloads (

Database Management Systems (DBMSs) are a ubiquitous and critical component of modern computing. The result of decades of research and development in both academia and industry, DBMSs have enabled the earliest multi-user server systems ...

20 [Optimistic concurrency for clusters via speculative locking](#)

 [Michael Factor](#), [Assaf Schuster](#), [Konstantin Shagin](#), [Tal Zamir](#)

May 2009 **SYSTOR '09: Proceedings of SYSTOR 2009: The Israeli Experiment**

Publisher: ACM  [Request Permissions](#)

Full text available:  Pdf (538.11 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): 5, Downloads (12 Months): 41, Downloads (



Transactional memory and speculative locking are optimistic concurrency control techniques that enable highly concurrent execution while reducing the programming effort. In this paper, we compare both methods: optimistically ...

Keywords: distributed computing, optimistic concurrency control

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